DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: GORDON POND	Lake Area (ha):	1.21
Town: LINCOLN	Maximum depth (m):	3.8
County: Grafton	Mean depth (m):	1.5
River Basin: Merrimack	Volume (m³):	18000
Latitude: 44°04'04" N	Relative depth:	2.9
Longitude: 71°45'20" W	Shore configuration:	1.62
Elevation (ft): 2567	Areal water load (m/yr):	67.37
Shore length (m): 630	Flushing rate (yr^{-1}) :	45.20
Watershed area (ha): 107	<pre>.1 P retention coeff.:</pre>	0.30
<pre>% watershed ponded:</pre>	.0 Lake type: na	atural

BIOLOGICAL:	7 February 1997	5 August 1996
DOM. PHYTOPLANKTON (% TOTAL) #1	SPARSE - MOSTLY	TABELLARIA 50%
#2	DETRITUS AND BENTHIC	MOUGEOTIA 35%
#3	DIATOM FRUSTULES	
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		1.36
DOM. ZOOPLANKTON (% TOTAL) #1	SPARSE - NO DOMINANT	SPARSE - NO DOMINANT
#2		
#3		
ROTIFERS/LITER	4	<1
MICROCRUSTACEA/LITER	<1	14
ZOOPLANKTON ABUNDANCE (#/L)	15	14
VASCULAR PLANT ABUNDANCE		Common/Abun
SECCHI DISK TRANSPARENCY (m)		2.5
BOTTOM DISSOLVED OXYGEN (mg/L)	3.0	3.2
BACTERIA (E. coli, #/100 ml) #1		1
#2		
#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None Hypolimnion volume (m^3) : None Anoxic volume (m^3) : None

CHEMICAL:			GORDON PO	OND	
	7 February 1997 5 August 1996		1996		
DEPTH (m)	2.5		2.0		
pH (units)	5.3		4.6		
A.N.C. (Alkalinity)	1.6		-0.8		
NITRATE NITROGEN	< 0.05		< 0.05		
TOTAL KJELDAHL NITROGEN	0.34		0.33		
TOTAL PHOSPHORUS	0.008		0.011		
CONDUCTIVITY (µmhos/cm)	22.8		21.7		
APPARENT COLOR (cpu)	70		85		
MAGNESIUM			0.20		
CALCIUM			1.0		
SODIUM			< 1.0		
POTASSIUM			< 0.40		
CHLORIDE	< 2		< 2		
SULFATE	3		3		
TN : TP	43		30		
CALCITE SATURATION INDEX					

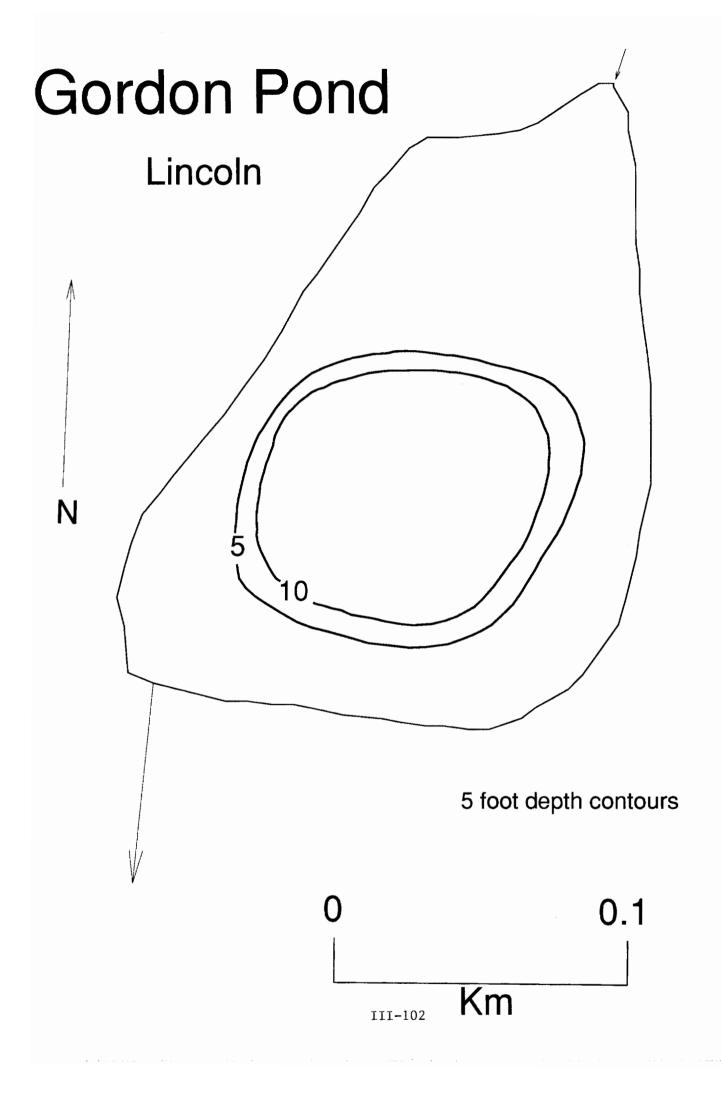
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1996

D.O.	s.D.	PLANT	CHL	TOTAL	CLASS
**	3	4	0	7	Meso.

COMMENTS: This is a high elevation, remote pond located within the White Mountain National Forest on the southern slope of Mount Wolf. It was sampled jointly with the Fish and Game Department.

- 2. Motorboats are not allowed.
- 3. Gordon Pond is an acid, tea-colored pond with essentially no buffering capacity (A.N.C.).
- 4. Phytoplankton and zooplankton were both sparse. One of the dominant genera of phytoplankton was *Mougeotia*, a filamentous green alga that is often abundant in acid ponds.
- 5. The water level was down about three feet; the beaver dam was open.



FIELD DATA SHEET

LAKE: GORDON POND

DATE: 08/05/96

TOWN: LINCOLN

WEATHER: HAZY, HOT, HUMID

DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	23.0	7.6	88 %
1.0	18.0	8.0	85 %
2.0	14.0	7.8	74 %
3.0	12.2	6.8	62 %
3.5	12.0	3.2	30 %
	·		

SECCHI DISK (m): 2.5

COMMENTS: There was an 110 C

BOTTOM DEPTH (m): 3.8

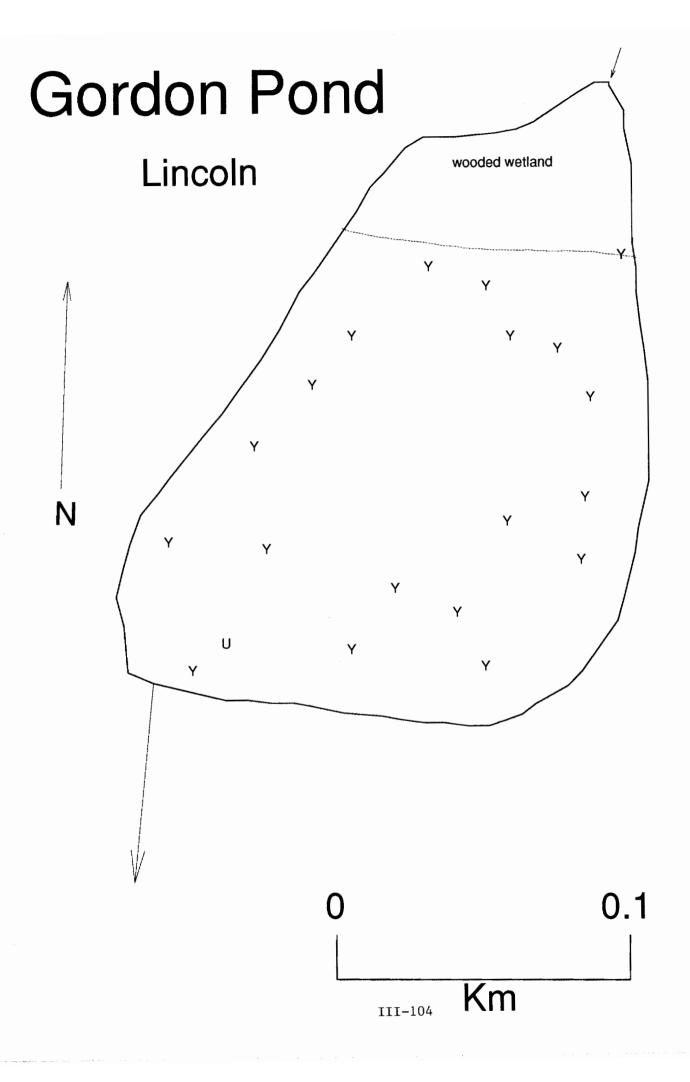
temperature drop from top to

bottom, but no defined

thermocline.

*Dissolved oxygen values are in mg/L

TIME: 1228



AQUATIC PLANT SURVEY LAKE: GORDON POND TOWN: LINCOLN DATE: 08/05/96 PLANT NAME Key ABUNDANCE **GENERIC** COMMON Y Nuphar Yellow water lily Common/Abun U Utricularia Bladderwort Sparse OVERALL ABUNDANCE: Common/Abun

GENERAL OBSERVATIONS:

- 1. A wooded wetland and beaver lodge was present at the northern, inlet end of the pond.
- 2. The Nuphar plants had very small floating leaves.